



## Backwater Valves Protect Basements

### Full Mitigation Best Practice Story

#### *Cumberland County, Maine*

**South Portland, ME** - The City of South Portland has an old combined sewer system. When it rains, all of the runoff goes into the system. When heavy rain and flooding occurs, the sewer system is overwhelmed and the cellars of houses are swamped. This has resulted in health hazards and repeated damage to items in the basements.



Homeowners with backflow problems called David Thomas, Collection Systems Manager for the City of South Portland, who got the idea to have backflow preventers installed in homes with such problems. Thomas then applied for a Hazard Mitigation Grant made available from an October 1996 disaster declaration.

In February 1998, the City began its Backwater Valve Program and installed valves in 89 participating houses within 5 months. Each valve cost \$397, including installation. The city council approved expenditure of \$35,000. Of that, the Federal share was \$26,250 and the City paid the rest.

The program is considered a success. Despite a June 1998 rainfall of more than 10 inches that caused flooding across central and southern Maine, none of the participating homeowners reported flooding. Since the valves were installed, the City has not received any calls from distressed homeowners. Savings in avoided damages from the 1998 flood and future floods is expected to be at least \$75,000.

Standard Homeowner's insurance policies do not cover flood damage. The National Flood Insurance Program makes Federally backed flood insurance available to homeowners, renters, and business owners in participating communities.

#### Activity/Project Location

Geographical Area: **Single County in a State**

FEMA Region: **Region I**

State: **Maine**

County: **Cumberland County**

City/Community: **South Portland**

### Key Activity/Project Information

Sector: **Public**  
Hazard Type: **Severe Storm; Flooding**  
Activity/Project Type: **Flood-proofing; Flood Control; Utility Protective Measures**  
Activity/Project Start Date: **02/1998**  
Activity/Project End Date: **06/1998**  
Funding Source: **Hazard Mitigation Grant Program (HMGP); Local Sources**  
Funding Recipient: **Local Government**  
Funding Recipient Name: **City of South Portland, Collection Systems**

### Activity/Project Economic Analysis

Cost: **\$35,000.00 (Actual)**

### Activity/Project Disaster Information

Mitigation Resulted From Federal Disaster? **Yes**  
Federal Disaster #: **1143 , 10/28/1996**  
Value Tested By Disaster? **Yes**  
Tested By Federal Disaster #: **No Federal Disaster specified**  
Year First Tested: **1998**  
Repetitive Loss Property? **Unknown**

### Reference URLs

Reference URL 1: **<http://www.floodsmart.gov>**  
Reference URL 2: **<http://www.state.me.us/mema/>**

### Main Points

- Valves prevent backflow into homes
- In February 1998, the City began its Backwater Valve Program and installed valves in 89 participating houses within 5 months.
- Since the valves were installed, the City has not received any calls from distressed homeowners. Savings in avoided damages from the 1998 flood and future floods is expected to be at least \$75,000.